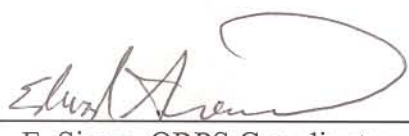




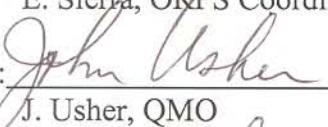
Brookhaven National Laboratory

Quarterly Performance Report

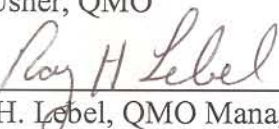
**1st Quarter FY 2006
(02/16/06)**

Prepared by: 
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I. Executive Summary

This report is the ninth edition of the Quarterly Performance Report and covers the first quarter of FY 2006. It is developed and issued by the Brookhaven National Laboratory (BNL) Quality Management Office, as required by Department of Energy (DOE) Order 231.1A, *Environment, Safety and Health Reporting*. The purpose of this report is to ensure that recurring events are identified. Events identified as recurring are processed in a Significance Category “R” recurring occurrence report.

During the first quarter of FY 2006, the Quality Management Office reviewed Issues and/or potential issues from the following documented sources:

- Occurrence Reports;
- ORPS nonreportable events logged by ORPS Categorizers;
- Radiological Awareness Reports (RARs);
- Procurement Nonconformances;
- Institutional Assessment Tracking System (ATS) conditions entered.

Analysis of the data for the first quarter of FY 2006 indicates that a recurring occurrence report is not warranted.

New Area Requiring Attention

Housekeeping: Tier 1 inspections indicate that general housekeeping issues are a dominant finding. This issue was brought to the attention of the BNL Policy Council. Management attention is needed to assure that housekeeping issues are resolved and the risk of recurrence is minimized and that inadequate housekeeping does not contribute to unsafe working conditions.

Areas Requiring Continued Attention

Material Handling: Recurring material handling problems were reported in the second quarter of FY 2004 in ORPS “R” Report CH-BH-BNL-BNL-2004-0005 and in NTS-CH-BH-BNL-BNL-2004-0002, “Recurring Material Handling Problems.” At completion of this Quarter, 43 actions have been closed and 7 remain open, one of which is 3 months overdue. The overdue action involves implementing tighter controls on procurement of Hoisting & Rigging Equipment. Continued management attention is needed to resolve this discrepancy. An assessment by BNL’s Internal Audit & Oversight Office to validate effectiveness of completed corrective actions was in progress at completion of the quarter.

Railcar Events: On September 29, 2005, a meeting was facilitated by the Laboratory Occurrence Reporting Coordinator to review/discuss the recent history of railcar events at BNL and the path forward concerning occurrence reporting. At this meeting a decision was made by the Environmental Restoration Projects Director (based on frequency and potential consequence) to re-categorize occurrence report EM-BH-BNL-BNL-2005-0009 to an “R” Recurring occurrence report titled “Recurring Railcar Events.” The Final occurrence report was issued on January 27, 2006. Continued monitoring is needed to

assure that all corrective actions are tracked to completion as scheduled in the Laboratory Assessment Tracking System (ATS) and are effective in resolving the noted concerns.

II. Introduction

The ORPS Program is intended to: (1) ensure the timely collection, reporting, analysis, and dissemination of information on environmental, safety, and health issues, and (2) ensure the Department of Energy (DOE) and National Nuclear Security Administration (NNSA) are informed of events that could adversely affect the health and safety of the public or workers, the environment, the intended purpose of DOE facilities, or the credibility of DOE. The Quarterly Performance Report is performed to identify possible recurring program deficiencies and describe ORPS program activities at the Laboratory. If a recurring program deficiency is identified, it is reported to DOE via a Significance Category “R” recurring occurrence report. Section III of this report includes a summary of the documents reviewed, performance analysis of the issues/events reviewed and other data. Section IV summarizes the ORPS Program activities for the first quarter of FY 2006. Section V summarizes Areas Receiving Continued Attention.

III. Performance Analysis

The following exhibits provide a summary of the issues reviewed for the first quarter of FY 2006, including a summary of the documents reviewed and trend analysis.

A. Document Review Summary:

Exhibit 1: Documents Reviewed for First Quarter FY 2006 Performance Analysis

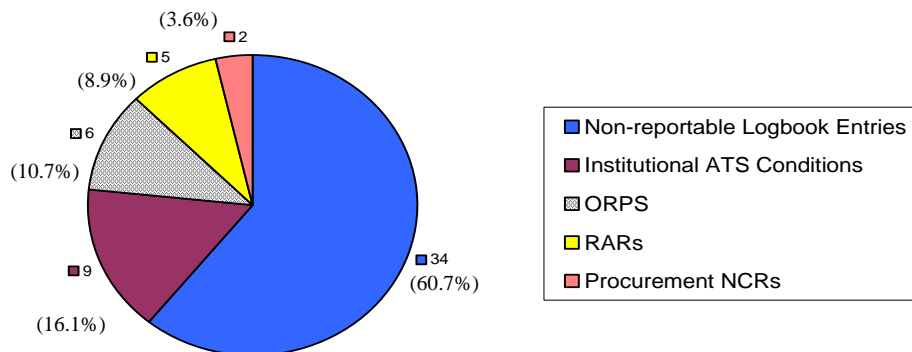


Exhibit 1 indicates 56 documents were reviewed for the first quarter performance analysis of FY 2006. Approximately 61% of the documents reviewed were ORPS nonreportable logbook entries made by the eight BNL on-call ORPS Categorizers. Two of the nonreportable logbook entries were also captured as Radiological Awareness Reports (RAR).

Note: The eight BNL ORPS Categorizers are a cadre of volunteer senior personnel who have received significant training on the reporting criteria of DOE Manual 231.1-2, *Event Reporting and Processing of Operations Information*. They are on a rotating schedule and available 24 hours a day, 7 days a week to determine event reportability. Each

determination that a categorizer renders is logged with justification. It is important that BNL staff draw upon the categorizer's expertise shortly after event/condition discovery so that a timely, accurate, and consistent determination of ORPS reportability is rendered.

Exhibit 2: Documents Reviewed per Quarter

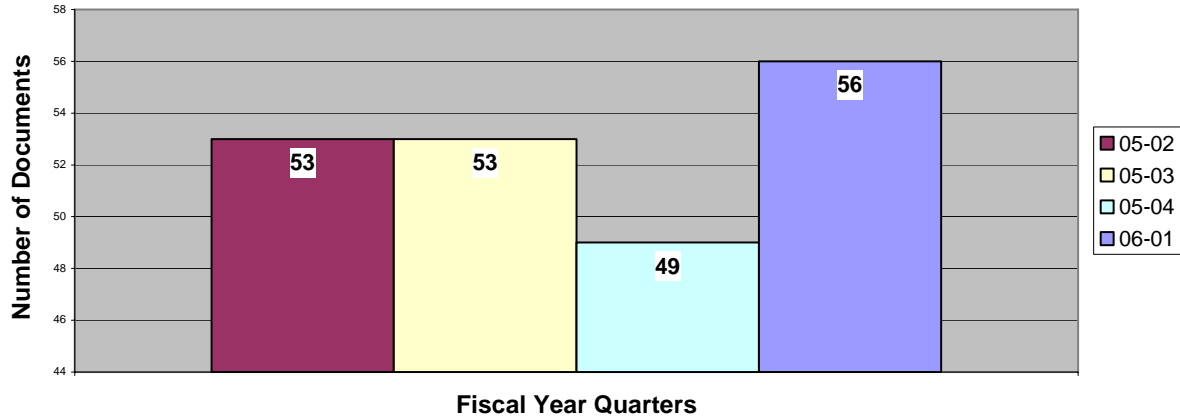


Exhibit 2 depicts the number of documents reviewed per quarter. On average, 53 documents per quarter were reviewed.

Exhibit 3: ORPS Reportable and ORPS Nonreportable Logbook Events

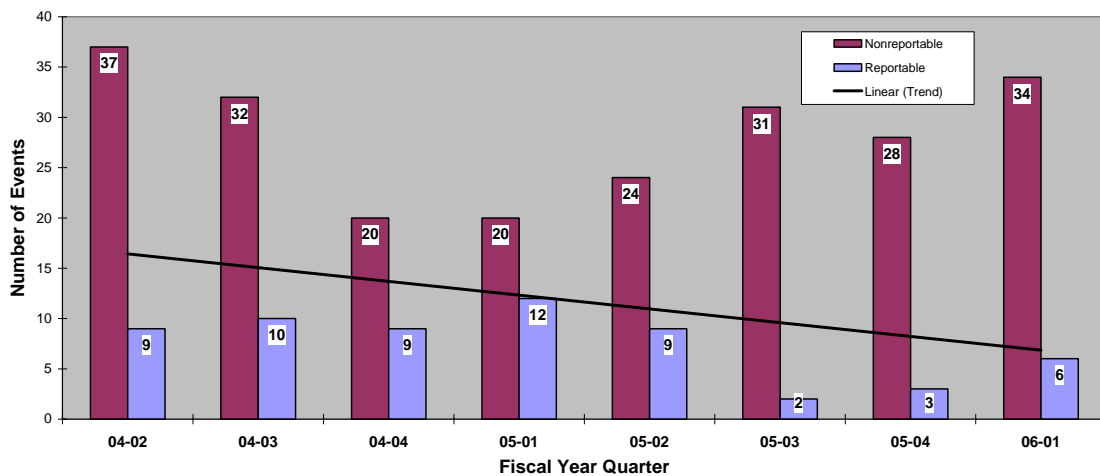


Exhibit 3 shows the number of ORPS reportable events and events/conditions evaluated by the BNL ORPS Categorizers and subsequently determined to be non-reportable over the last eight quarters. Decreasing trend in number of ORPS reports is noted.

Exhibit 4: Distribution of ORPS Reports by Reporting Criteria

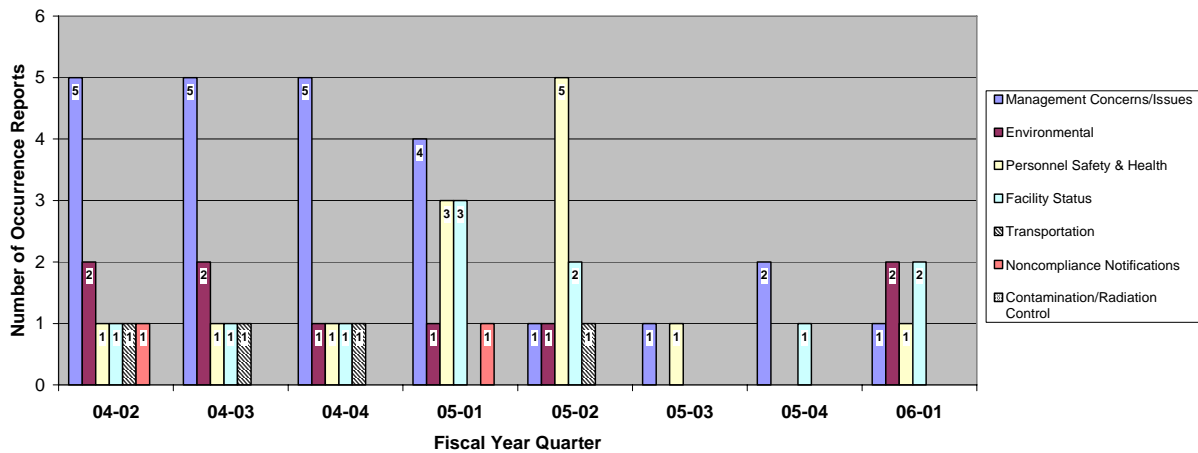


Exhibit 4 shows the number of BNL ORPS reports coded by ORPS reporting criteria, for each of the last eight quarters. No adverse trend is noted.

Exhibit 5: Analysis of Issues by Major Category

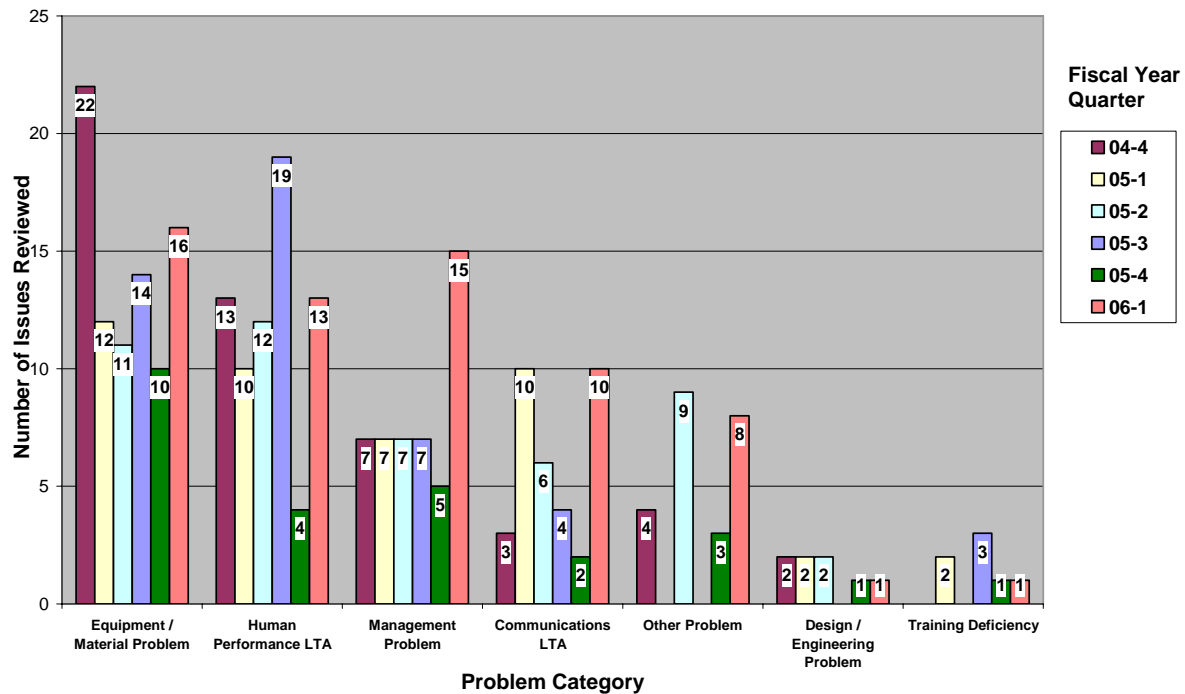


Exhibit 5 is a trend of ORPS cause codes per quarter during last six quarters. The associated issues were reviewed and apparent cause codes were assigned from the ORPS Causal Analysis Tree in DOE G231.1-2, *Occurrence Reporting Causal Analysis Guide*. Some issues were assigned more than one cause, and some issues were determined to be of no significance and therefore were not assigned a cause code. No adverse trend is noted.

Note: The following are the definitions of the cause codes as defined by the DOE G231.1-2, *Occurrence Reporting Causal Analysis Guide*:

- An equipment/material problem is defined as an event or condition resulting from the failure, malfunction, or deterioration of equipment or parts, including instruments or material.
- Human performance less than adequate refers to an event or condition resulting from the failure, malfunction, or deterioration of the human performance associated with the process. This category is intended for individual actions or lack thereof.
- Management problem refers to an event or condition that could be directly traced to managerial actions or methodology (or lack thereof). A “management” problem can be attributed to management methods (directions, monitoring, assessment, accountability, and corrective action), inadequate resource allocation, work organization and planning, supervisory methods, and/or change management practices.
- Other problems include problems caused by factors beyond the control of the organization (i.e., legacy radiological or hazardous material).
- Communications less than adequate refers to inadequate presentation or exchange of information.
- A design/engineering problem is an event or condition that can be traced to a defect in design or other factors related to configuration, engineering, layout, tolerances, or calculations.
- Training deficiency refers to an event or condition that could be traced to a lack of training or insufficient training to enable a person to perform a desired task adequately.

B. Procurement Quality:

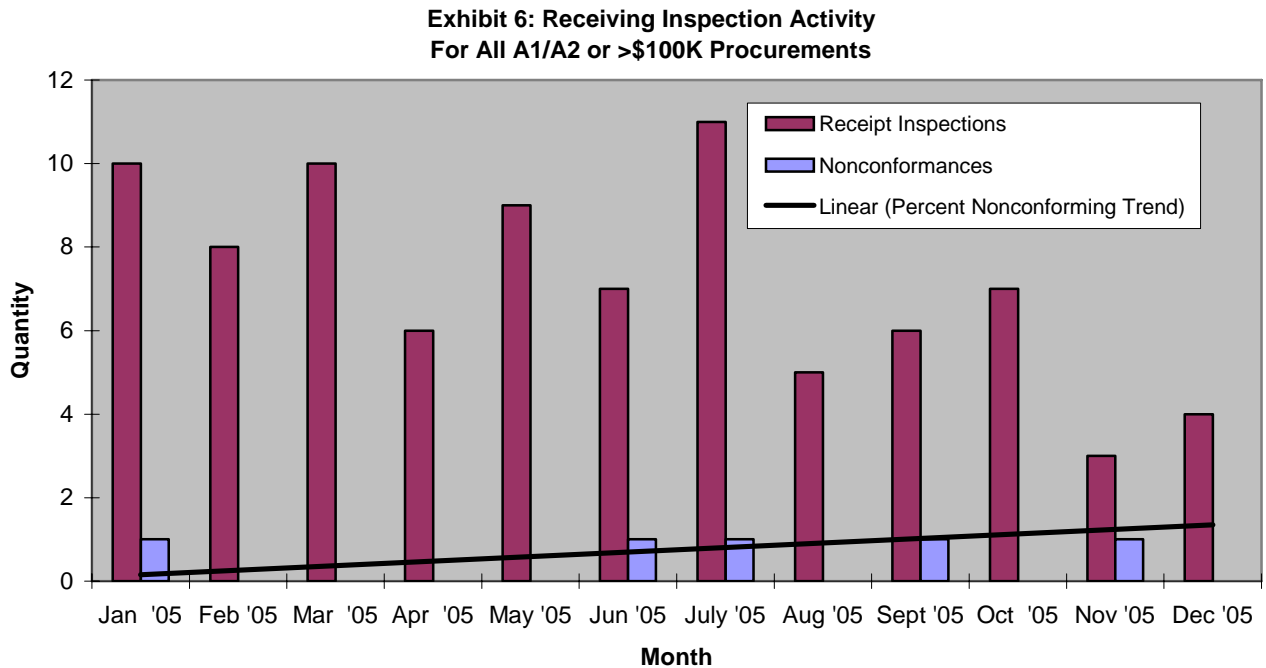


Exhibit 6 shows the results of receipt inspections, including the number (87) performed, the number of nonconformances (5) found, and the nonconformance trend over the past year. Based on the inspections performed 6% identified a nonconformance. Two of the five nonconformances were issued due to late delivery issues.

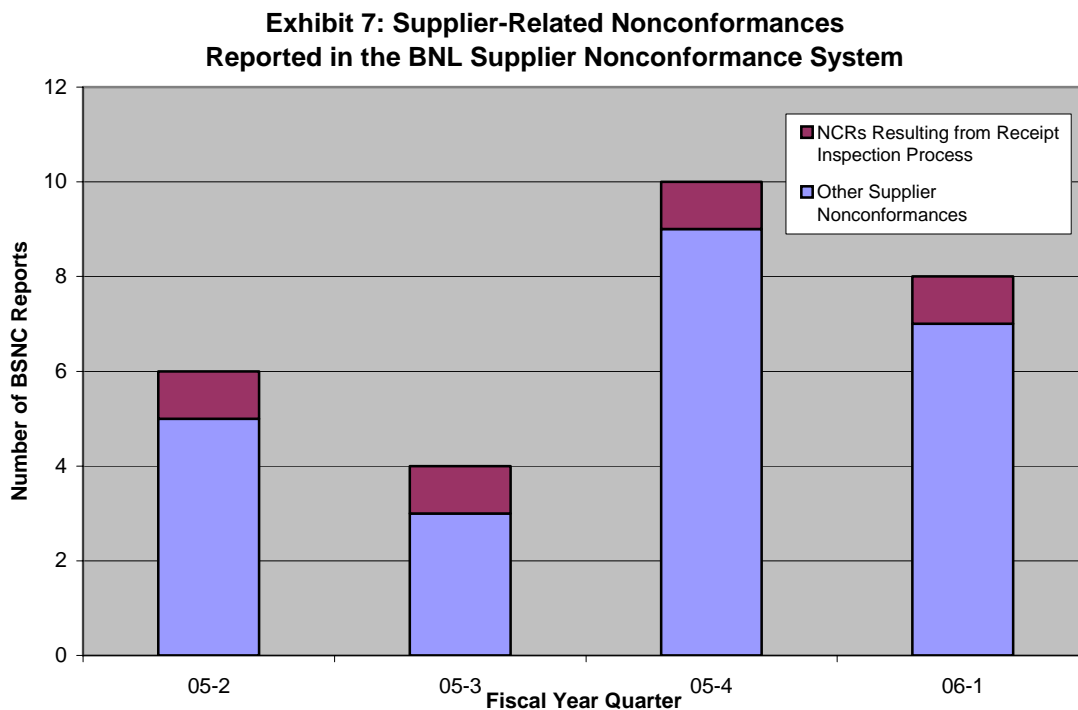


Exhibit 7 represents the activity of the web-based BNL Supplier Nonconformance Reporting and Tracking System to include one nonconformance identifying a receipt process concern and seven nonconformances addressing off the shelf/inventory concerns. No adverse trend is noted.

C. Environment, Safety, Health and Quality (Tier I) Inspections:

The Environment, Safety, Health and Quality (ESH&Q) (Tier I) Inspections Subject Area establishes requirements for Line Organization Environment, Safety, Health and Quality (Tier I) Inspections of work areas. Tier I indicates the level of activity by line organizations, with additional tiers being at the Laboratory-level, and external. A procedure provides the framework for organizations to communicate and track to closure ESH&Q deficiencies and observations identified during their walk-through inspections of work areas at the Laboratory.

The collection of ESH&Q Tier I inspection data at the institutional level began during the first quarter of fiscal year 2005. The evaluation and use of this data is still under development.

Exhibit 8: Laboratory Tier I Dominant Findings

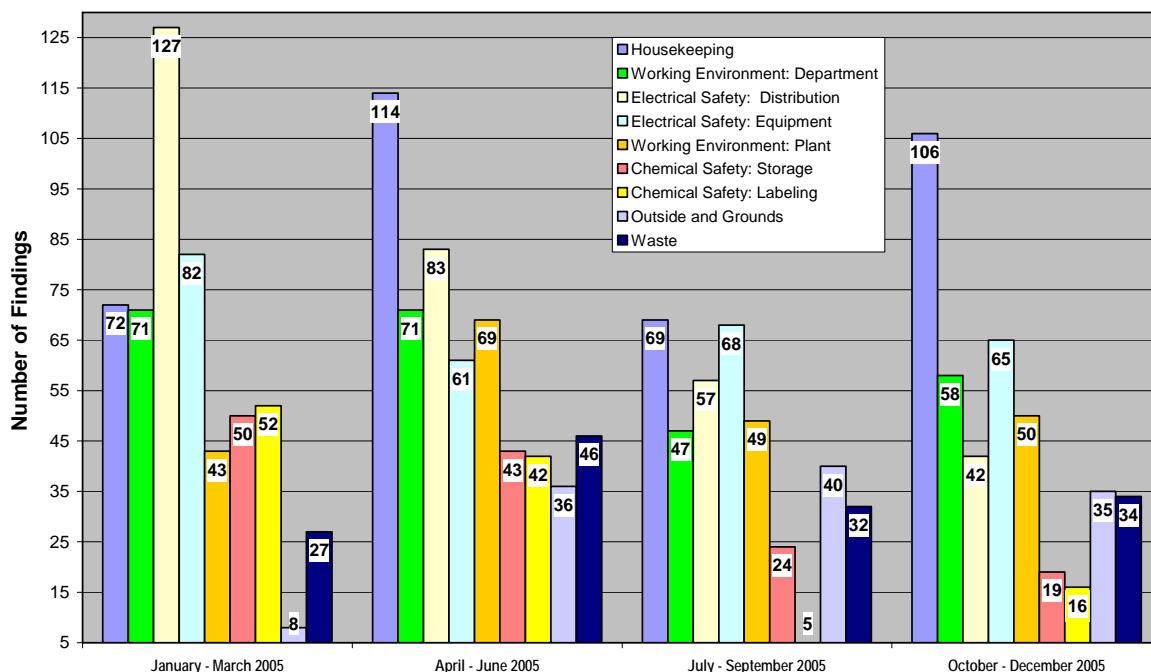


Exhibit 8 is a display of the dominant Tier I inspection findings for each quarter. It is noted that housekeeping is the dominant finding during Tier I inspections.

Note: The following are the definitions of the nine categories noted above:

- Housekeeping - General housekeeping; waste container - design, availability; egress paths, i.e., floors, aisles, emergency egress; excessive storage; sanitary

conditions of eating/food prep areas; areas free of insects, rodents, pests; and maintenance issues.

- Working Environment: Department - Fume hoods – inspection, labeling, use; eyewash routine flush; hazard information placards – correct/complete; EXIT signs posted appropriately; proper storage of heavy equipment/materials; refrigerators/freezers - labeled and functioning; appropriate warning signs/postings; ladders - fixed and portable in compliance; and appropriate emergency planning postings.
- Electrical Safety: Distribution - Electric distribution panels – labeling, installation, accessibility, missing knockouts; loose and missing covers on panels, raceways or outlets; emergency disconnect switches – labeling, accessibility; electrical outlets – adequacy; improper grounding; exposed conductors; soft cords used as permanent wiring; cable trays overloaded; unsecured junction box; and GFCI protection within 6 ft. of sinks/wet areas.
- Electrical Safety: Equipment - Condition of electric cords, cascaded power strips or extension cords; hand tools not grounded or double insulated; frayed power cords, extension cords, or heater tapes; ungrounded plugs; missing knockouts; illegal extension cord use; lack of strain relief; and missing covers/exposed wires.
- Working Environment: Plant - Adequacy of general ventilation, heat and/or AC; appropriate lighting; walking and working surfaces; emergency shower/eyewash annual inspection; emergency lighting; appropriate warning signs/postings; fall protection as required; and inadequate aisle-ways, trip hazards in walkway, load ratings not posted, missing floor or ceiling tiles, broken hardware on doors, windows or machines, exposed building insulation, overdue inspection on cranes, hoists and elevators, lack of toe-boards or improper railings.
- Chemical Safety: Storage - Area postings; segregation of incompatibles; container condition; no chemicals stored in hood; secondary containment (e.g., trays) as required; explosion proof and flammable cabinet/refrigerator/freezer as required; and legacy storage.
- Chemical Safety: Labeling - Chemical contents/hazard label; labels legible and in English; CMS bar coding; peroxide forming chemicals – monitored and date-labeled; and carcinogens labeled.
- Outside And Grounds - Access to buildings; Condition of stairs, ramps walkways; Modular building/trailer skirts intact; Grounds free of waste and debris; Condition/contents of waste bins; Building perimeter and rooftop maintenance area condition; Exterior equipment; Outside storage; Exterior lighting; Condition of emergency doors; Building security; External pests.

- Waste - 90-Day Collection Area – posting, contingency plans, container labeling, segregation, containment, secondary containment, storage, time limits, weekly inspection logs; Satellite Accumulation Areas – posting, open container, container labeling, secondary containment, segregation, non-waste items; Radioactive Waste Accumulation Area – posted, proper storage, labeling, time limit, monthly inspection log; Battery collection – posting, segregation; Oily waste receptacle available/used; Solder recycle; Regulated medical waste noncompliance.

**Exhibit 9: Laboratory Tier I Quarterly Inspection Total FY2006
Findings by Directorate**

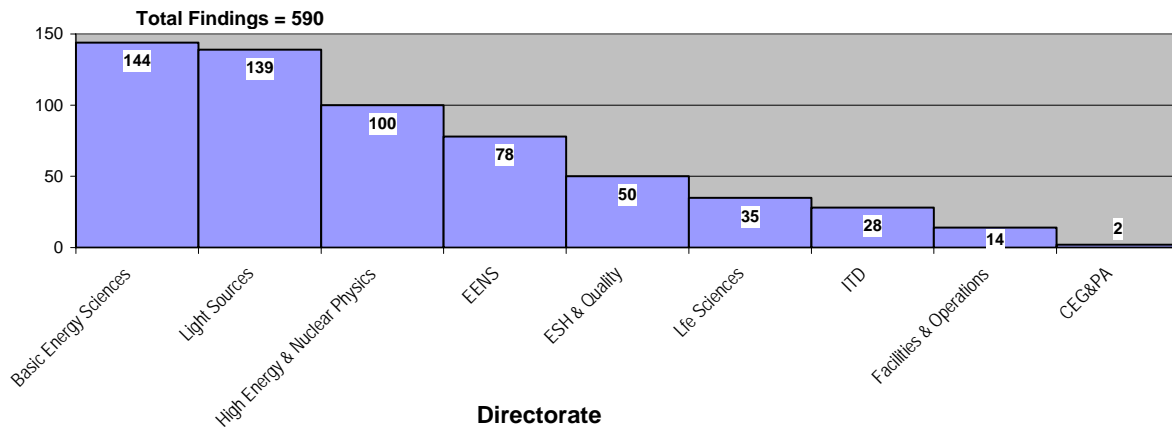


Exhibit 9 depicts Tier I inspection findings by Directorate.

IV. ORPS Activities

Exhibit 10: BNL ORPS Report (End of Month) Trend

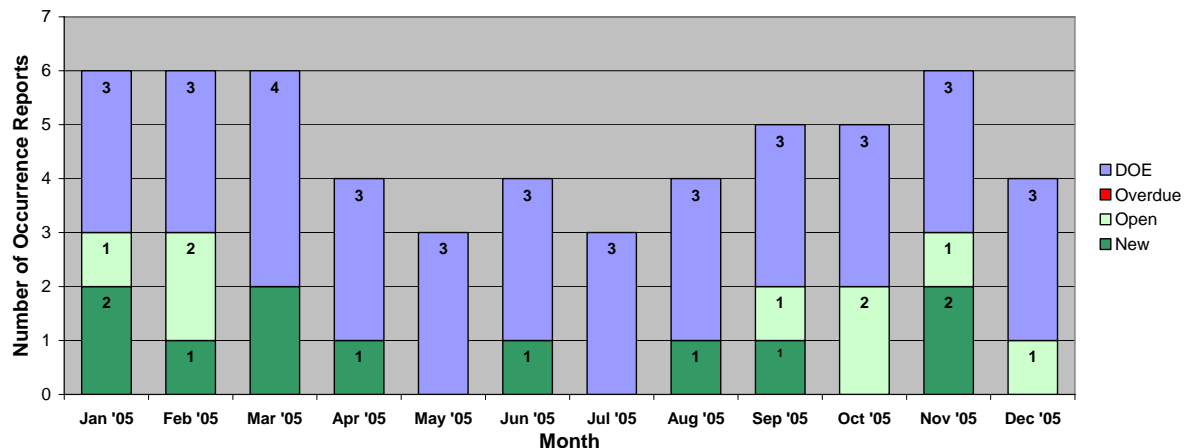


Exhibit 10 depicts the ORPS Report trend for the last 12 months. Reports are shown in various states to include: awaiting DOE approval, in progress (open), or new report issued. No adverse trend is noted. The following three reports (dating back to 1999) are still awaiting approval by DOE Program Managers:

- SO-CH-BH-BNL-BNL-1999-0021, “Liquid Nitrogen Dewar Overpressure”
- NE-CH-BH-BNL-BNL-2001-0030, “Misclassification of Radioactive Material Shipped Offsite”
- NE-CH-BH-BNL-BNL-2003-0003, “Receipt of Radioactive Material Shipment exceeds 49 CFR 173.443 Package Contamination Limits”

The following is a summary of the BNL’s ORPS Coordinator’s significant activities during the first quarter of FY 2006:

- Facilitated quarterly Categorizer’s Workshops (#2005-03 & #2005-04) on October 6, 2005 and December 20, 2005 respectively. The goals of each workshop were to
 - Evaluate and improve the BNL Occurrence Reporting Program; and
 - Maintain a baseline categorization process such that reportability decisions are both valid and consistent.
- Issued BNL Information Resources Management System Maturity Evaluation Report (October 3, 2005)
- Participated on a team, which conducted a Failure Modes & Effects Analysis on experimental drug program (October 3 & 17, 2005)
- Commenced facilitation of the “Recurring Railcar Events” (occurrence report EM-BH-BNL-BNL-2005-0009) causal analysis (October 12, 2005)
- Facilitated Tier I Workshop (#2005-04) on October 17, 2005. The goals of this workshop are to
 - Review ESH&Q (Tier I) Inspection tracking/trending data at the organizational and/or institutional levels;
 - Identify Laboratory-wide issues and program vulnerabilities/gaps and share information to facilitate lessons learned in process/program effectiveness;
 - Discuss corrective actions taken and evaluate their effectiveness; and
 - Identify the path forward toward continual improvement, the potential institutional impact and the need for institutional corrective action(s).
- Attended Kepner-Tregoe Problem Solving and Decision Making workshop (October 25-27, 2005)
- Issued Quarterly Performance Report, 4th Quarter FY2005 (November 18, 2005)
 - “R” Recurring occurrence report titled “Recurring Railcar Events” was issued and was identified as a new area requiring attention. The Material Handling Program was identified as an area needing continuing attention.
- Submitted lessons learned 2005-CH-BNL-RCD-002 “Combined Asbestos and Radiological Workplace Hazards Present Unique Challenges” to the DOE lessons learned database (12/06/05)
- Completed facilitation of causal analysis and corrective action plan for “Violation of High Flux Beam Reactor Safety Evaluation Report,” occurrence report EM--BHSO-BNL-HFBR-2005-0001 (December 7, 2005)

V. New Area Requiring Attention

Housekeeping: Housekeeping is defined as general housekeeping; waste container - design, availability; egress paths, i.e., floors, aisles, emergency egress; excessive storage;

sanitary conditions of eating/food prep areas; areas free of insects, rodents, pests; and maintenance issues. Tier I inspections indicate that general housekeeping issues are a dominant finding. This issue was brought the attention of the BNL Policy Council. Management attention is needed to assure that housekeeping issues are resolved and the risk of recurrence is minimized.

VI. Area Requiring Continued Attention

Material Handling: Recurring material handling problems were reported in the second quarter of FY 2004 in ORPS “R” Report CH-BH-BNL-BNL-2004-0005 and in NTS-CH-BH-BNL-BNL-2004-0002, “Recurring Material Handling Problems.” At completion of this Quarter, 43 actions have been closed and 7 remain open, one of which is 3 months overdue. The overdue action involves implementing tighter controls on procurement of Hoisting & Rigging Equipment. Continued management attention is needed to resolve this discrepancy. An assessment by BNL’s Internal Audit & Oversight Office to validate effectiveness of completed corrective actions was in progress at completion of the quarter.

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VII. References

DOE Guide 231.1-2, *Occurrence Reporting Causal Analysis Guide*, August 2003.

DOE Order 231.1A, *Environment, Safety and Health Reporting*, August 2003.

Nonconformance Tracking System Report Number: NTS-CH-BH-BNL-2004-002, “Recurring Material Handling Problems.”

Occurrence Report Number: SC-CH-BH-BNL-BNL-2004-0005, “Recurring Material Handling Problems.”

Occurrence Report Number: EM--BHSO-BNL-HFBR-2005-0001, “Violation of High Flux Beam Reactor Safety Evaluation Report.”

Occurrence Report Number: EM-BH-BNL-BNL-2005-0009, “Recurring Railcar Events”
Quarterly Performance Report, 4th Quarter FY 2005.